

BOTANICAL GAZETTE

JANUARY, 1903

UNDESCRIBED PLANTS FROM GUATEMALA AND
OTHER CENTRAL AMERICAN REPUBLICS. XXIV.¹

JOHN DONNELL SMITH.

(WITH PLATE I)

Clusia Salvini Donn. Sm. (§ *Anandrogyne* Planch. et Triana).—Folia crassa oblongo-obovata apice rotunda in petiolum marginatum attenuata, nervis lateralibus late patentibus remotiusculis. Inflorescentia subspicata decussata quinqueflora, pedicellis brevissimis basi bracteatis, floribus ipsis ebracteatis. Sepala 4 decussata. Petala 5 obovata sepalis parum majora. Antherae filamentis 3-plo longiores. Staminodia 5 libera e basi semiorbiculari dentiformia. Capsula globosa 5-locularis, seminibus in loculo quovis numerosis leviter ascendentibus.

Ramuli subteretes di-trichotomi. Folia 11-17^{cm} longa 5.5-9^{cm} lata margine revoluta, costa subtus tantum prominente infra apicem folii desinente, nervis angulo 60° a costa abeuntibus 3-4^{mm} inter se distantibus, nervo collectivo submarginali, venuis supra tantum manifestis, petiolis 1-1.5^{cm} longis. Pedunculus cum axe quadrangularis, pedicellis vix 2^{mm} longis, bracteis ovatis 5^{mm} longis. Sepala late suborbicularia 7-9^{mm} longa. Stamina 45-50 circiter 7^{mm} longa pistilli rudimentum includentia, receptaculo convexo 4^{mm} diam. metiente. Capsula 15-18^{mm} crassa basi sepalis paullo auctis et petalorum vestigiis cincta staminodiis 1.5^{mm} altis instructa, stylis 3-4^{mm} longis subconnatis, stigmatibus obovatis 2-3^{mm} longis in conum conniventibus, seminibus imbricatis circiter 20 plerumque abortivis. Flores feminini deficiunt.

Volcán de Fuego, Depart. Zacatepéquez, Guat., alt. 2600^m, Oct. 1873,
Osbert Salvin.—Volcán de Fuego, Guat., alt. 2300^m, Mart. 1892, *Donn. Sm.*, n. 2530 ex Pl. Guat. &c., quas ed. *Donn. Sm.*

¹ Continued from *BOT. GAZ.* 33: 262. 1902.

Melochia Bernoulliana Donn. Sm. (§ MOUGEOTIA K. Schum. in Mart. Fl. Bras. 12³: 35).—Folia praeter nervos glabra magna lanceolato-ovata graciliter attenuata basi rotundata vel subcordata dupliciter serrata. Flores nunc in axillis fasciculati nunc in thyrsos axillares et terminales foliis plus minus breviores foliis reductis deciduis bracteatos dispositi. Calyx petalis triente brevior usque ad duas partes partitus, segmentis ovatis acuminatis. Tubus stamineus petalis bis superatus ultra medium fissus. Capsula breviter stipitata depresso-globosa calycem aequans profunde lobata.

Suffrutex 1-1.5^m altus, ramulis petiolis foliorum nervis inflorescentiae axibus calycibus capsulis minutissime stellulato-pubescentibus. Folia 8-13^{cm} longa 3-5^{cm} lata, nervis lateralibus praeter 1-2 utrinque basales inferiores breves parallelis utrinque 7-9, petiolis 1.5-3^{cm} longis ad apicem versus incrassulatis, stipulis cito deciduis. Pedicelli 2-7^{mm} longi. Calyx campanulatus 4^{mm} altus. Petala attenuato-ob lanceolata 6^{mm} longa. Stamina 4^{mm} longa, filamentis liberis 1.75^{mm} longis, antheris 1^{mm} longis. Ovarium pilosum ovale 1^{mm} longum stylos liberos aequans vel eis dimidio brevius. Capsula pilis longis conspersa pentagona 4^{mm} longa, coccis loculicide indehiscentibus toto tergo dehiscentibus, seminibus glabris oblique lateque ovalibus 2.5^{mm} longis compressis.

Retalhuleu, Guat., 1877, *Bernoulli* et *Cario*, nn. 3112 et 3113.—Ad oras Río De Los Esclavos, Depart. Santa Rosa, Guat., alt. 800^m, Nov. 1892, Heyde et Lux, n. 4319 ex Pl. Guat. &c., quas ed. Donn. Sm.

Microsechium (?) compositum Donn. Sm.—Folia punctata supra scabriuscula subtus glabrescentia cordato-suborbicularia latiora quam longiora leviter obtuseque 5-7-lobata, margine denticulato. Inflorescentiae folia longe superantes, pedunculis simplicibus vel repetitus dichotomis, floribus 4-5-meris in racemulos dissitos confertis graciliter pedicellatis. Calycis tubus pateriformis 8-10-radiatus sub apice 8-10-foveolatus, dentibus minutis. Petala oblongo-ovata extus canescentia. Staminum filaments gracilia usque ad medium coalita.

Altissime scandens. Folia membranacea subtus pallidiora cum sinu basilari subrectangulari 5-6^{cm} longo 3-4^{cm} lato adjecto 18-21^{cm} longa 22-26^{cm} lata, nervis in mucrones subulatos excurrentibus, petiolis glabrescentibus 10-16^{cm} longis. Cirrhi glabri elongati striati. Inflorescentiae cum pedunculis plerumque simplicibus 8-12^{cm} longis adjectis 35-50^{cm} longae, dichotomiis circriferis, racemulis numerosissimis sessilibus vel pedunculatis multifloris, pedicellis 11-28^{mm} longis, floribus in sicc. intense viridibus plerumque pentameris

Calyx 5^{mm} latus, dentibus subulatis 2^{mm} longis. Petala patula intus puberula 5–6^{mm} longa 7-nervia. Staminum filamenta 5^{mm} longa supra medium radiata, antheris 4 vel saepius 5 suborbicularibus 1^{mm} longis bilocularibus, loculis flexuosis. Caules flores feminini fructus non suppetunt.—Hanc speciem solum ad folia et inflorescentias masculinas ex caule strictas constitutam Microsechio haud absque dubio adscripsi.

Malpais, Depart. Santa Rosa, Guat., alt. 1100^m, Sept. 1893, Heyde et Lux, n. 6146 ex Pl. Guat. &c., quas ed. Donn. Sm.

Psychotria anomothyrsa K. Schum. et Donn. Sm. (§ NOTOPLEURA Benth. in Oerst. Centralam. Rub. 37).—Folia maxima membranacea nitida oblanceolato- vel obovato-oblonga acuminata in petiolum longum complanatum attenuata. Pedunculi ex axillis alternis orti petiolis longiores, thyrsi ramis 2–3-nis, nunc semel vel bis dichotomis, nunc inferne trichotomis superne dichotomis, bracteolis oppositis alternatim floriferis, floribus minutis sessilibus secus axes binatim raro singulatim dissitis. Drupa pallida lineolis candidis farcta.

Suffrutex superne subherbacea simplex glabrescens hinc inde lineolatus. Folia subtus pallidiora 25–35^{cm} longa 9–17^{cm} lata, nervis lateralibus inter se 1–2^{cm} distantibus utrinque 9–14, petiolis marginatis 3–8^{cm} longis, stipulis deciduis. Pedunculi 6–12^{cm} longi sicut inflorescentiae axes complanati et marginati. Thyrsi cinereo-puberuli pyramidales vel oblongi 4–12^{cm} longi, axibus divaricatis nonnunquam recurvatis, bracteolis amplexicaulibus ovatis 1–2^{mm} longis. Calyx obpyramidatus 1.25^{mm} altus, dentibus obtusiusculis. Corolla glabra lineolata 4–5^{mm} longa usque ad tertiam vel quartam partem lobata, lobis ovatis. Stamina paullo infra fauces barbatas vel imberbes inserta, filamentis brevissimis. Drupa obovato-ovalis 5^{mm} longa 3.5^{mm} lata, endocarpio tenuissimo, pyrenis dorso profunde 4-sulcatis facie ventrali planis laevibus.—*P. uliginosae* Sw. proxima inflorescentiis anomalis insigniter distinguitur.

Cubilquitz, Depart. Alta Verapaz, Guat., alt. 350^m, Dec. 1900, von Tuerckheim, n. 7909 ex Pl. Guat. &c., quas ed. Donn. Sm.—Prope Tarapoto, Peruvia Orientalis, 1855–6, Spruce sine numero.—El Recreo, Prov. Manabi, Ecuador, Eggers, n. 15.119. (Exemplaria Eggersiana thrysos magis elongatos optime evolutos praebent.)

Rudgea ceratopetala Donn. Sm.—Folia elliptica vel oblongo-elliptica utrinque praesertim sursum longe contracto-acuminata, petiolis brevissimis, stipulis breviter oblongis apice aculeoligeris. Cyma longe pedunculata foliis paullo vel dimidio brevior laxiflora, floribus pubescentibus, lateralibus graciliter pedicellatis.

Corolla calyce 4-plo longior usque ad medium paene fissa, tubo cylindrico ad medium staminigero et ibidem tantum piloso, segmentis patentibus linearibus apice inflexo-cornutis.

Praeter flores glabra. Rami dichotomi. Folia chartacea 11–16^{cm} longa 4–6.5^{cm} lata, nervis lateralibus subtus conspicuis utrinque 8–10, petiolis 2–3.5^{mm} longis. Stipulae 3^{mm} longae aculeis cartilagineis pluribus incisae. Pedunculi 4–5^{cm} longi, cymis 3–5^{cm} altis 6–7^{cm} latis, ramis oppositis 2-jugis divaricatis bis dichotomis, floribus 5-meris in dichotomiis sessilibus, cymulis trifloris, pedicellis lateralibus subdivaricatis 7–9^{mm} longis, bracteis minutis triangularibus integris. Calycis 3^{mm} alti limbus in sicc. pallescens cupulatus denticulatus tubum breviter cylindricum aequans. Corolla in sicc. fusca, segmentis 5^{mm} longis 3-nerviis cornu 1^{mm} longo appendiculatis. Antherae inclusae 3^{mm} longae filamentis 3-plo longiores. Stylus pubescens cum stigmatibus 2^{mm} longis adjectis corolla paullo brevior. Baccæ ignotæ. — Ad *R. micrantham* Muell. Arg. inflorescentia et calyce accedens foliis pedunculis corollis aliisque notis tamen recedit.

Cubilquitz, Depart. Alta Verapaz, Guat., alt. 350^m, 1901, von Tuerckheim, n. 7904 ex Pl. Guat. &c., quas ed. Donn. Sm.

Eupatorium hypomalacum Robinson.—Frutescens vel suffrutescens; ramis cortice griseo tectis subancipitibus, internodiis in parte superiore plus minusve sexangularibus pilis perbrevibus incurvatis vestitis; foliis oppositis lanceolatis integris vel obscure remoteque denticulatis acuminatis basi acutis penninervatis tenuibus supra laete viridibus in venuis sparse pubescentibus subtus pallidioribus molliter tomentosis et glanduliferis 12–14^{cm} longis 3.5–4.5^{cm} latis; petiolis subteretibus fulvo-tomentulosis 1.5^{cm} longis; thyrso pyramidato 1^{dm} longo; bracteolis oppositis perbrevibus griseis basi crassiusculis; capitulis parvis 8–10-floris graciliter pedicellatis; squamis involuci paucis (10–12) valde inaequalibus pallide viridibus striatis sparse pubescentibus acutis, exterioribus lanceolatis, interioribus oblongis 4–5^{mm} longis; corollis albis glabris 2.4^{mm} longis, faucibus teretibus tubum proprium perbrevem superantibus, dentibus 5 brevissimis deltoideis; achenio 2.2^{mm} longo acute angulato in angulis sursum hispidulo; pappi setis subaequalibus circa 25 albis simplicibus.

This species shows a general affinity to *E. pinabetense* Robinson, *E. Tuerckheimii* Klatt, and *E. pansamalense* Robinson, although it is not very close to any one of these species.

Los Verdes, Depart. Amatitlán, Guat., alt. 1100^m, Aug. 1893, Heyde et Lux, n. 6157 ex Pl. Guat. &c., quas ed. Donn. Sm.

Sideroxylon uniloculare Donn. Sm.—Folia glabra maxima oblongo- vel obovato-elliptica cuspidato-acuminata basi cuneata, nervis lateralibus parallelis remotis utrinque conspicuis, petiolis brevibus. Calycis segmenta basi coalita jam in alabastro aperta. Corollae calyce dimidio longioris lobi orbiculares. Stamina cum staminodiis eis paullo longioribus lanceolatis sub apice tubi affixa, antheris subsessilibus lateraliter dehiscentibus. Ovarium depresso-obpyramidalatum 1-loculare, ovulo unico nunc pendulo nunc lateraliter affixo.

Folia coriacea 13-21^{cm} longa 6-9^{cm} lata, cuspide obtusiuscula, nervis lateralibus inter se 1-1.5^{cm} distantibus utrinque 12-14 subtus validis, venis minutissime reticulatis subtus prominulis, petiolis canaliculatis 8-15^{mm} longis. Pedicelli ferrugineo-pubescentes dense fasciculati 7^{mm} longi, floribus 5-meris. Calyx ferrugineo-pubescentis 2^{mm} altus usque ad duas partes fissus, segmentis ovatis consimilibus. Corolla glabra, lobis tubum bis superantibus margine erosionis. Antherae ovatae 0.5^{mm} longae pilis albidis conspersae. Staminodia 1^{mm} longa subintegra. Ovarium pubescens 0.75^{mm} altum 1.5^{mm} latum, stylo subulato 0.5^{mm} longo, stigmate parvo integro. Bacca mihi non visa.

Secus Río De Las Vueltas, Tucurrique, Costa Rica, alt. 635^m, Maj. 1899, Tonduz, n. 13358 herb. nat. Cost.

Styrax polyneurus Perk.—Arbor, rami subteretes, juniores fusco-tomentosi, adulti demum glabrescentes, folia 1-1.5^{cm} longe petiolata, lanceolata vel obovato-lanceolata vel obovato-oblonga, 12-9^{cm} longa, 4-2.25^{cm} lata, basi in petiolum a latere compressum sensim cuneato-angustata, apice acuta vel breviter late acuminata, apice ipso acutiusculo, papyracea vel subchartacea, integra, supra juniora hinc inde pilos stellatos minutos gerentia, adulta glabra, subtus pilis albidis lepidotis stellatis tomentosa, nervis 6-9-jugis venisque supra vix, subtus valde prominentibus, venis validioribus inter sese parallelis rectangulariter costae insedentibus, omnibus dense reticulatis; flores ignoti; fructus ovoideus, 7^{mm} longus, 3-4^{mm} crassus, breviter mucronatus, lepidibus argenteis dense tectis.—Ab incolis *Resina* dicitur.

This species is closely related to *S. myristicifolius* Perk. in Bot. Jahrb. 31: 481, but differs from it in the form and nervature of the leaf, and in the color and shape of the hairs on the under surface. It is very noticeable that

the fruit of *S. polyneurus* is much smaller than that of *S. myristicifolius*, and that it is densely covered with silvery scales.

In silvis ad Copey, Cost., alt. 1800^m, Febr. 1898, *Tonduz* n. 11744 herb. nat. Cost.

Dianthera sulfurea Donn. Sm. (§ JACOBINIOIDEAE, Ser. E. Benth. et Hook.)—Folia brevissime petiolata ovato-lanceolata in apicem obtusiusculum producta basi rotunda vel subcordata praeter nervos venasque glabrescentia. Pedunculi axillares foliis 3-4-plo breviores, spica subcapituliformi triflora, floribus pedunculum paullo superantibus. Calyx bracteolis aequilongus, segmentis 4 lanceolato-linearibus. Corolla flava densissime longeque pilosa usque ad medium fere bilabiata, labio postico integro. Antherae sagittatae, connectivo triangulare.

Suffrutex 1-2-metralis, ramis brachiatis declinatis teretibus unifariam pubescentibus. Folia 6-9^{cm} longa 2-3.5^{cm} lata basi saepe inaequalia supra cystolithis dense atro-lineolata, petiolis pubescentibus 2-3^{mm} longis. Pedunculi pilis conspersi 15-25^{mm} longi, bracteis 5^{mm} et bracteolis 8^{mm} longis attenuato-linearibus glandulari-pilosis. Calycis segmenta basi breviter coailita pilosula. Corolla 26-28^{mm} longa, tubo recto superne paullo ampliato, labio postico erecto, antici paullo brevioris lobulis 2-3^{mm} longis. Stamina labium posticum aequantia, antheris 3^{mm} longis basi 2^{mm} latis, loculis oblongis divergentibus, altero breviore paululum inferius posito. Discus cupularis. Ovarium oblongum 2.5^{mm} altum 4-ovulatum, stylo 28^{mm} longo. Capsula ignota.—*D. latifoliae* Benth. et Hook. proxima differt insigniter corollae colore.

Cerro Redondo, Depart. Santa Rosa, Guat., alt. 1200^m, Sept. 1893, *Heyde et Lux*, n. 6215 ex Pl. Guat. &c., quas ed. Donn. Sm.

Ocotea tenera Mez et Donn. Sm.—Foliis submembranaceis, glaberrimis, anguste vel bene ellipticis, basi acutis apice elegansissime acuminatis, penninervibus, utrinque sed praesertim subtus laxe prominulo-reticulatis; inflorescentiis tenerrimis, laxis squarrosisque, ♂ tripinnatim, ♀ bipinnatim paniculatis, quam folia brevioribus; floribus subdioicis, glaberrimis; tubo perianthii brevissimo; filamentis glabris vel pilis perpaucis, brevissimis praeditis, ♂ quam antherae subrectangulares, anguste rotundatae paullo longioribus, ♀ paullo brevioribus; staminodiis nullis vel minutissimis, stipitiformibus; ovario glabro, stylo crassiusculo, breviore.

Ramuli gracillimi, glaberrimi, cortice esipido, mucoso. Folia petiolis vix ultra 10^{mm} longis, tenuibus stipitata, sparsa vel subdisticha, utrinque sed praesertim subtus nitidula, plus minus 120^{mm} longa, 40^{mm} lata, sicca nunc manifestius nunc obscurius nigrescentia et margine (saepius non nisi minute) crispulata. Inflorescentiae ♂ submultiflorae, ♀ pauciflorae, pedicellis gracillis usque ad 5^{mm} longis, bracteis deciduis. Flores 2-2.5^{mm} longi, limbi segmentis aequalibus, e late ovato ♂ longius ♀ breviter acutis, constanter punctulis numerosissimis mucosis in sicco prominulis aqua mollitis sub lente optime pellucidis insignibus. Glandulae florales filamentis ser. III basi affixa, e minoribus, globosae. Ovarium floribus ♂ quoque haud male evolutum. Bacca ellipsoidea, plus minus 22^{mm} longa, 11^{mm} diam. metiens, cupulae parvae, simplicimarginatae, planiusculae, sensim in pedicellum clavatim incrassatum transeunti insidens, inflorescentiae cuique fructiferae singula evoluta.

Turrialba, Prov. Cartago, Cost., alt. 570^m, Jun. 1895, *Tonduz*, n. 8330 herb. nat. Cost.—In silvis prope Shirores, Talamanca, Cost., alt. 100^m, Febr. 1895, *Pittier* et *Tonduz*, n. 9184 herb. nat. Cost.—La Colombiana, Llanuras de Santa Clara, Cost., alt. 200^m, Jun. 1899, *Pittier*, n. 7607 ex Pl. Guat. &c., quas ed. Donn. Sm. (n. 13396 herb. nat. Cost.)

Croton pyramidalis Donn. Sm. (§ EUCROTON Muell. Arg.)—Folia oblongo-ovata acuminata cordata abbreviato-3-5-nervia basi biglandulosa discoloria supra sparsim subtus densissime ciliatolepidota. Racemi in paniculas unisexuales axillares terminalesque amplas dispositi, masculini floribundi, feminini sparsius floriferi, floribus solitariis, femininis brevius pedicellatis. Floris ♂ petala oblonga, stamina 15. Floris ♀ petala nulla, styli 4-fidi.

Arbor. Indumentum lepidibus ciliato-radiatis quasi tomentulosum in ramulis petiolis foliorum nervis paniculis calycibus ferruginascens. Folia 10-17^{cm} longa 5-9^{cm} lata integra subtus canosa, petiolis 3.5-5^{cm} longis, stipulis subulatis 3-4^{mm} longis deciduis. Paniculae foliis reductis inferne suffultae subpyramidales 11-18^{cm} longae, bracteolis subulatis 3-4^{mm} longis deciduis. Floris ♂ calyx campanulatus 4^{mm} altus pedicellum subaequans, glandulis obovatis crassis, segmentis breviter coalitis ovatis intus glabris, petala calyci aequilonga extus cano-villosa, stamina praeter basin glabra 7^{mm} longa, antheris linear-ellipticis 2^{mm} longis, receptaculum cano-villosum. Floris ♀ calyx mari similis pedicello bis longior, glandulis inconspicuis, ovarium lepidotum hemisphericum 2.5^{mm} latum, stylis lepidotis crassis 1.5^{mm} longis apice ramos 4 glabros simplices 2^{mm} longos ferentibus, capsula globosa 5.5-diametralis, seminibus nitidis atris rugulosis.—Ad *C. paniculatum* Muell. Arg. nonnullis notis accedit, paniculis unisexualibus (an dioicis?) tamen recedit; hanc ob rem affinitas systematica perincerta est.

Ad oras Río Dolores in fundo Cubilquitz, Depart. Alta Verapaz, Guat., alt. 350^m, Jul. 1901, *von Tuerckheim*, n. 7974 ex Pl. Guat. &c., quas ed. Donn Sm.—Eandem plantam, ut videtur, a cl. E. P. Johnson in Yucatan vel Tabasco sub n. 118 lectam in Herb. Kew. inveni.

Zamia Tuerckheimii Donn. Sm.—Folia glabra 14-jugo-pinnata, rhachi petiolum sparsim minuteque aculeatum bis superante ultra foliola graciliter producta, foliolis suboppositis oblanceolatis abrupte breviterque acuminatis in basin perangustam attenuatis integerrimis, nervis in medio folioli 40 et ultra in basi circiter 8. Strobilus ♂ linearis-cylindricus pedunculo bis longior, staminibus tota facie inferiore praeter plagam medium angustum loculigeris. Strobilus ♀ brevissime pedunculatus longe cuspidato-acuminatus, carpidorum seriebus et verticalibus et horizontalibus circiter 9.

Truncus saxifragus primum pendens demum ascendens 1.5–3^m longus 2^{dm} crassus nonnunquam furcatus (De Tuerckheim in litt.). Folii rhachis trigona circiter 9^{dm} longa, internodiis 5–7^{cm} longis, mucrone terminali 1.5^{cm} longo, foliolis firmo-chartaceis supra nitidulis subtus pallidioribus 19–24^{cm} longis medio 4–5^{cm} basi 3^{mm} latis. Strobilus ♂ 14^{cm} longus 2.5^{cm} crassus apiculatus, peltis cano-farinosis truncato-pyramidalis subaequaliter hexagonis, staminum seriebus verticalibus circiter 24, horizontalibus circiter 36, loculis 18–26 globosis discretis vel binatim cohaerentibus. Strobilus ♀ pedunculo 2^{cm} longo sustentus 18^{cm} longus 6^{cm} crassus, cuspide peltis sterilibus adspersa tenuiter conica 3^{cm} longa, peltis cinereo-tomentulosis planis hexagonis bis et ultra latioribus quam longioribus. Semina coccinea obovoidea 2^{cm} longa 13^{mm} lata.—Monente Thiselton-Dyer, Hort. Bot. Reg. Kew, claro rectore, *Z. acuminatae* Oerst. ex Dyer in Hemsl. Biol. Centr.-Am., necnon *Z. Houtteanae* This.-Dyer, MS. in Herb. Kew, affinis; haec tamen foliolis falcatis vix acuminatis, illa foliolis paucioribus sensim tenuiterque acuminatis, utraque nervis minus crebris, diversa; utriusque strobili ignoti.

In praecipiis saxosis udis umbrosis prope Cubilquitz, Depart. Alta Verapaz, Guat., alt. 350^m, Jul. 1900, *von Tuerckheim*, n. 7786 ex. Pl. Guat. &c., quas ed. Donn. Sm.

EXPLANATION OF PLATE I.—FIG. 1, leaf, reduced to $\frac{1}{8}$ natural size.—FIG. 2, leaflet, natural size.—FIG. 3, staminate strobile, natural size.—FIG. 4, vertical view of stamen, enlarged.—FIG. 5, upper side of stamen, enlarged.—FIG. 6, lower side of stamen, enlarged.—FIG. 7, strobile in fruit, natural size.—FIG. 8, lower side of carpodium, enlarged.—FIG. 9, upper side of carpodium, enlarged.—FIG. 10, seed, enlarged.—FIG. 11, vertical section of seed, enlarged.—FIG. 12, embryo, enlarged.

